1096-F1-656 **Itai Seggev*** (is+research@cs.hmc.edu), Wolfram Research, Inc., 2000 Trade Center Dr, Champaign, IL 61820. *Frame Construction in Linear Algebra: Frenet-Serret as Modified Gram-Schmidt.*

The existence and computation of the Frenet-Serret frame is commonly viewed as a topic in vector calculus, specific to 2- or 3-dimensional Euclidean space. While it is rooted in differential geometry, the construction of the frame is better thought of as a modified Gram-Schmidt process applied to the tangent field and its derivatives. It thus can be applied to curves in any inner-product space and fits naturally into a course on linear algebra. The frame provides an immediate application of and visualization for Gram-Schmidt. Additional concepts, such as orientation, the perpendicular space, and basis completion can be easily added or avoided by careful selection of examples. By using functionality available in recent versions of Mathematica, this topic can be explored conceptually and with a minimum focus on computation (if so desired). (Received September 08, 2013)